

REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested.

The Examiner rejects Claims 1-21 under 35 U.S.C. §103(a) as being unpatentable over Griesmer et al. in view of Lavigne. The Examiner states that Griesmer disclosed a plurality of data queues, here called free queues, an arbitration table, herein called forwarding table comprising a plurality of entries, herein called forwarding entry sets, empty flags from each of the data queues, the flags indicating that there is no data to be sent from that queue. The Examiner states that Griesmer does not explicitly teach a first multiplexer receiving an output from a first table entry and an output from a second table entry in the arbitration table or a second multiplexer receiving empty flags from each of the data queues, the flags indicating that there is no data to be sent from that queue, an output from the second multiplexer being coupled to a control input of the first multiplexer if the corresponding queue has data to be sent out and the second table entry value is sent out from the first multiplexer if the queue corresponding to that table entry has data to be sent out and the queue corresponding to the first entry has no data to be sent out.

The Examiner states that Lavigne, in the same field of endeavor, discloses an arbitrator system comprising an arbitrator logic circuit, a first multiplexer receiving an output from a first table entry and an output from a second table entry in the arbitration table, and a second multiplexer receiving empty flags from each of the data queues, a module 10 and a module 20 of Figure 1 to process the separate subsections of the table entries. The Examiner concludes that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Griesmer's teaching by incorporating the teaching of Lavigne to connect to arbitration system 100 to use the first multiplexer and the second multiplexer. The Examiner states that the motivation is to reduce the processing cycle because, by collecting data from the subtending transmission devices round robin arbitration typically entails choosing elements or

entries of a table or a set in a way that describes some sort of cyclical successive approximation, and would involve many logic gates processing.

This rejection is respectfully traversed. The Examiner is incorrect that Griesmer, et al. shows that arbitration system. Griesmer shows a system for a LAN in which the system contains a list of the resources in the LAN and the addresses thereof. As with any system of this type, entries are added and removed through the system so that space must be left for additional resources to be added. This results in fragmentation of the data in that some areas of the storage medium would run out of room and the allocated file for which requires that additional space be provided at another portion of the storage medium, and a pointer set to the extended storage area. At the same time, other portions of the system will not be using the space allocated to them. This fragmentation of storage is similar to that which occurs on a hard disk of a computer system. The invention of Griesmer et al. is similar to the "defrag" operation on a computer system. That is, the data is compacted to that there is less wasted space on the storage medium the data can be accessed quickly.

An arbitrator is used to choose one particular message out of a whole list of messages that needs to go out to the same port where all messages cannot be sent at once. In Griesmer et al. the forwarding decisions are used to determine where the received message will go, not to arbitrate among the plurality of messages that are going to the same resource or through the same port. Referring specifically to Column 1, Lines 36-43, we see that these forwarding decisions must be made at the maximum transmission rate of the attached LAM segments in order to prevent the bridge being the limitation on the network. Thus, there is no desire to hold the data in order to arbitrate between which data will go out of which port. Furthermore, although the Examiner refers to Column 7, Lines 59-60, we refer the Examiner to the same Column at Lines 10-28. This portion of the reference describes exactly how the device works, which it clearly shows that the Examiner's interpretation is incorrect. For example, this portion of the text states that the bridge will search its database for a forwarding entry and if it does not find such a forwarding entry, it will broadcast them to all the LAN segments to

which it is attached except the one from which the message was received. Thus, it is clear that no arbitration takes place.

Combining Griesmer et al. with Lavigne does not enhance the Examiner's position. First of all, although Lavigne is a round-robin arbitrator, although it does not say it is a weighted round robin arbitrator, and is thus not combinable with Griesmer et al.

Secondly, Lavigne breaks the process into a two-step process by first choosing a block of a predetermined number (16) of request bits and then determine which block has at least one nonempty request. The second stage then selects one of these and provides a traditional arbitration process on this selected group. Therefore, the multiplexers aren't receiving a first data entry and then if that has no data substituting a second entry, as required by Claim 1, for example.

Accordingly, Applicant has not amended the claim in view of the reference cited by the Examiner.

Applicant has amended the specification in Paragraph 0001 to recite the application serial number of the co-pending application recited therein. Applicants have also corrected a minor typographical error in Paragraph 0003.

Accordingly, Applicants believe that the application, as amended, is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,
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